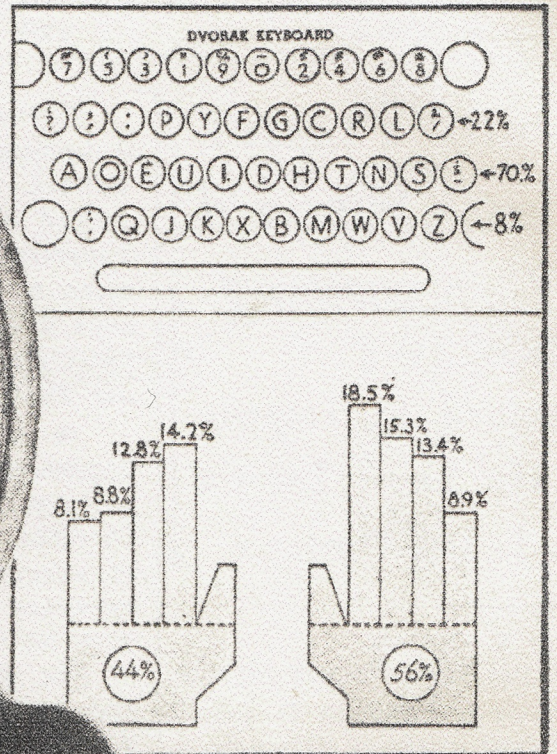
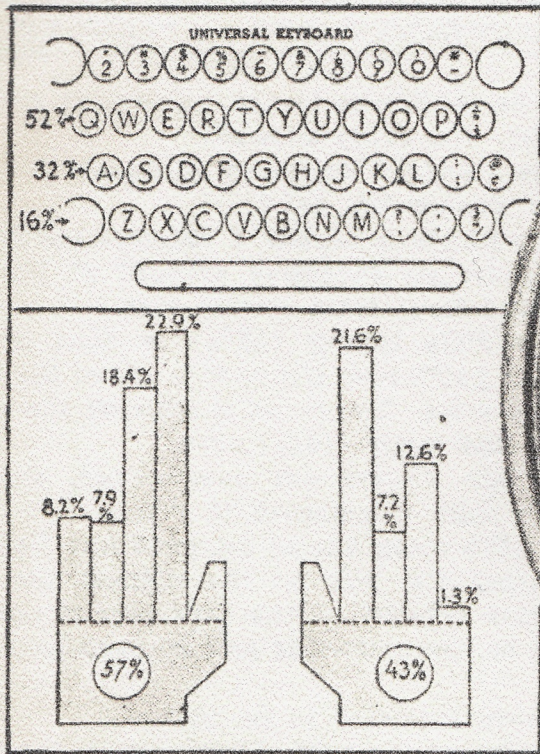




# Reform—in Typewriting

**A**DD to the schedule for streamlining in the brave new post-war world: the typewriter keyboard which at present is as anachronistic as a bicycle built for two. A brand-new keyboard, inspired, like a lot of other things, by the exigencies of war, is already in partial use in the Navy Department, and tests show that it increases production as much as 74 per cent.

The quick brown fox jumps over the lazy dog in just about half the time and all good men can come to the aid of their party with a minimum of effort.

When Christopher Latham Sholes built the first typewriter in 1873, he had mechanical troubles. The typebars depended on gravity to fall back into place, and to keep them from colliding he had to put the most frequently used letter combinations as far apart as possible.

Then Ottmar Mergenthaler invented the linotype in 1886 and started out with a typewriter keyboard. It soon became obvious that the left hand was doing more than its share, so the keyboard was changed to give the left hand fewer letters, but the ones most active in the alphabet, while the right hand was assigned to all the rest. That's why "etaoin shrdlu" frequently gets into a printed page by mistake when the compositor runs his finger down the two left-hand rows of keys to fill a pied line.

The linotype keyboard has been very satisfactory, but the arrangements of letters on a typewriter conformed with Mark Twain's comment on the weather—everybody griped about it but nobody did anything about it until Commander August Dvorak tackled the job. Examining the keyboard in an attempt to step up production in the Navy Department at Washington, he found that 57 per cent of the load was placed on the left, or weaker, hand; that the fingers must do an excessive amount of jumping from row to row, and that a few fingers are overworked while others loaf.

Commander Dvorak, former director of research of the University of Washington and now a naval efficiency expert, worked out an entirely different arrangement, placing the important keys on the "home" row, the one on which the fingers rest.

"The difference was obvious right away," he says. "The average typist's fingertips travel from 12 to 20 miles a day but only one mile a day on the new keyboard. On the standard keyboard, only 59 words can be typed without lifting the fingers from the home row, but with this arrangement there are 3,000."

On the Dvorak keyboard, the right hand does 56 per cent of the work, and individual fingers are assigned a load proportionate to their skill and strength.

Fourteen Navy Department typists were retrained on Dvorak's simplified machines and their production went up almost three-quarters. After in-

vesting \$52.52 to retrain each worker, the Navy has saved \$133 a month through increased output.

Students at Tacoma, Wash., trained from the beginning on the simplified keyboard, were averaging 37 words a minute after six months, and 48 words after a year, which is more than the ordinary student achieves after three years. Until Dvorak got busy, the speed record for typing was 149 words a minute—by Margaret Hamms—but Lenore Fenton MacLain, "the fastest secretary in the world," is able to type 182 words a minute on the new keyboard.

Typists using the Dvorak method also discovered that they made far

fewer mistakes, and that they were much fresher at the end of the day.

One gratified retrained typist wrote Commander Dvorak: "It certainly is a pleasure to sit down and know that at the end of a day you will be ready for an evening of pleasure. I can't tell you the difference between working on this keyboard and the standard one."

Another said: "It doesn't seem possible that after six weeks training I would be typing 57 to 62 words a minute in comparison with 45 to 50 words on the standard keyboard after a four-year typing course."

Not satisfied with this contribution to the prospective happiness of

country will be able to get along as well as the next fellow is all the reward I want," he said.

It probably won't be easy to convince typewriter companies and big business offices to change their equipment, but Commander Dvorak is sure that they can be persuaded after they see the difference.

"Do you know why the streets of Providence, R. I., are so crooked?" the commander demanded. "Till tell you. Roger Williams' cow zigzagged its way home every night through mud and thorns until it had worn a crooked path. Well, the automobiles are still following that cow path—and typists are following a cow path, too."

Standard Typewriter Keyboard (Left) Is the Same Now as When Christopher Sholes Invented the First Typewriter (Center) in 1873, But It May Give Way to the New Dvorak Keyboard (Right). Figures Indicate Comparative Loads for Each Row, Hand and Finger.

On the Dvorak Keyboard, Which She Is Demonstrating, Lenore Fenton MacLain, "the Fastest Secretary in the World," Is Able to Type 182 Net Words a Minute.

